



CLIMATE PROGRAM OFFICE ESSM DIVISION UPDATE

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ESSM DIVISION INTRODUCTION

Situated within NOAA's Office of Oceanic and Atmospheric Research (OAR), the Climate Program Office (CPO) [Earth System Science and Modeling \(ESSM\) Division's](#) mission is to advance scientific understanding of Earth's atmosphere, ocean, land, and cryosphere as an integrated system and to improve NOAA's Earth system models, predictions and applications for climate. The ESSM Division includes three climate competitive research programs: [AC4 \(Atmospheric Chemistry, Carbon Cycle, and Climate\)](#), [CVP \(Climate Variability and Predictability\)](#), and [MAPP \(Modeling, Analysis, Predictions, and Projections\)](#).

To accomplish this mission, ESSM funds a unique and highly flexible research enterprise, including process-level studies, predictability studies of climate phenomena, testing for research-to-operation and application transitions; improving model representations of key processes and prediction technologies, and developing methodologies, tools and products for applications. Through annual calls for proposals and in coordination with NOAA labs and centers and with the national and international research community (including the private sector), ESSM supports NOAA and its partners to undertake competitively selected research projects that align with NOAA's mission.

FY19 CPO FFO

CPO's [annual call for proposals](#) (Federal Funding Opportunity) was published on August 6. This year, ESSM has 6 competitions across AC4, CVP and MAPP.

Deadlines:

Letters of intent (LOIs) for all competitions should be received by email by **5pm ET on September 10, 2018**.

Full applications must be received by **5pm ET on November 20, 2018**.



FY19 Competitions:

AC4: AC4 Program solicits proposals that aim to explain various trends, patterns and extremes detectable in the existing long-term observational records. [View Information Sheet.](#)

CVP:

1. CVP is soliciting proposals for data analysis and/or coupled-modeling studies focused on the understanding of the ocean and atmosphere on interannual to multi-decadal timescales. [View Information Sheet.](#)
2. CVP is soliciting proposals focused on observing, understanding, and/or process modeling in support of the ATOMIC and/or the EUREC4A Ocean-Atmosphere field campaigns. [View Information Sheet.](#)
3. CVP is soliciting proposals for Climate Process Teams (CPT) focused on process representation improvements to ocean and/or atmospheric models. [View Information Sheet.](#)

MAPP:

1. MAPP is soliciting proposals for Climate Process Teams (CPTs) focusing on accelerating the realism in the modeling of land processes as part of the Earth's climate system. [View Information Sheet.](#)
2. MAPP is soliciting research proposals that build on Coupled Model Intercomparison Project Phase 6 (CMIP6) results for improved depictions of 21st century climate over the U.S. [View Information Sheet.](#)

Perspective proponents should refer to FFO and information sheets for specific competition information.



FY18 COMPETITION UPDATE

FY18 proposal processing is nearly done. Project details will be announced in October 2018. ESSM had [5 competitions](#).

- **AC4:** AC4 funded 10 projects from its FY18 competition on the topics of: laboratory/chamber based work on oxidation of biogenic volatile organic compounds (VOCs); data analysis and modeling; and satellite formaldehyde retrieval from NOAA's JPSS1/OMPS instrument.
- **CVP** (released Spring 2018): CVP anticipates funding 8 projects focused on "pre-field modeling studies" in support of a possible future TPOS2020 (Tropical Pacific Observing System 2020) field campaign. All of the projects have PIs or collaborators from the academic community. Half of the projects include a NOAA or CI scientist. Project details will be announced in October 2018.
- **MAPP:** MAPP anticipates funding 21 projects* through the following competitions: Advancing Earth System Data Assimilation; Addressing Key Issues in CMIP6-era Earth System Models; and NOAA Climate Test Bed - Advancing NOAA's Operational Subseasonal to Seasonal Prediction Capability.

*MAPP and AC4 co-funded the atmospheric composition proposals from the data assimilation competition.

FY19 BUDGET UPDATE

The FY19 Budget has yet to be finalized. The FY19 President's Budget proposed to eliminate the Climate Competitive Research budget line, which funds the majority of ESSM programs. So far, NOAA's budget has been marked up by House and Senate committees. The FY19 Senate mark states "the Committee rejects OAR's request to eliminate Climate Competitive Research". The reconciliation bill and final vote on spending has not been scheduled as of August 6.

| PPA | FY17 enacted | FY18 Pres. Budget | FY18 enacted | FY19 Pres. Budget | FY19 House mark | FY19 Senate mark | FY19 enacted |
|---------------------------------------|--------------|-------------------|--------------|-------------------|-----------------|------------------|--------------|
| Climate Competitive Research (in \$K) | 60,000 | 38,000 | 60,000 | 0 | 0 | 60,000 | TBD |

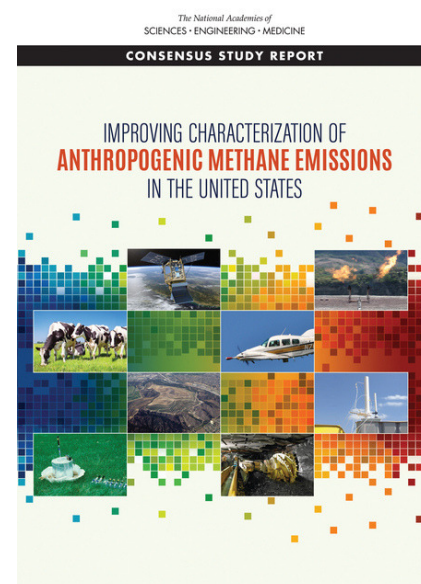
PROGRAM UPDATE: AC4

FIREX update: FIREX is now FIREX-AQ, a closer collaboration between NOAA and NASA. Instead of featuring both P3 and DC8, the field campaign (still scheduled for Summer 2019) will now involve NASA DC8 and one or two NOAA Twin Otters. Meanwhile, the results from FIREX Fire Laboratory experiment, the first phase of FIREX (October 2016) are being published. Characterization of smoke (emissions factors) has been a major success of the laboratory experiment.

Urban atmosphere: The second of three urban emissions workshops will take place in October 2018 in Salt Lake City, with continued scientist-stakeholder interactions. Urban air-quality is increasingly co-discussed.

National Academy of Sciences Methane report: The report was released on March 27, 2018, with a series of briefings. Report is [available online](#).

FIREX Firelab 2016 data: The FIREX Firelab 2016 data will be made public around August 15, about one year ahead of NOAA/NASA FIREX-AQ and just in time for WE-CAN data analysis. The data will be available here: <https://www.esrl.noaa.gov/csd/projects/firex/>.

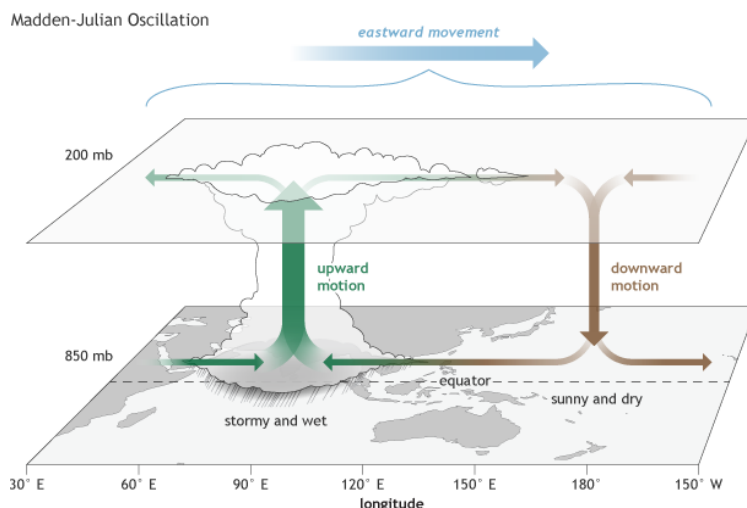


PROGRAM UPDATE: CVP

Years of the Maritime Continent (YMC) Field Campaigns: CVP is funding 15 research projects including observations, data analysis, and process-modeling as well as a joint US /Indonesian 30-day research cruise (co-funded by CVP, OAR, and BMKG). YMC is an international project that lasts from 2017 through 2020 with US, Indonesian and Japanese partners. The **US YMC website and data server** (<https://www.pmel.noaa.gov/ymc/>) is hosted by PMEL with CVP support.

Indonesia-NOAA Workshop: A NOAA-BMKG workshop was held in Jakarta in June 2018. Two CVP-funded PIs (C. Schumacher, Texas A&M University and Z. Pu, University of Utah) each held day-long training lectures for BMKG staff. Topics were advanced radar meteorology and applications, and numerical prediction and data assimilation.

2018 International AMOC Science Meeting: CVP-funded PIs presented their recent science results and updates at the joint US AMOC-UK RAPID Science Meeting in Miami, FL. (<https://usclivar.org/meetings/2018-amoc-rapid-meeting-agenda>) Presentations and posters are available on the webpage. A workshop report will be published soon.



PROGRAM UPDATE: MAPP

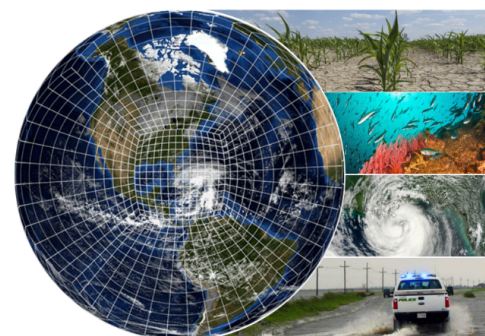
MAPP-NIDIS California Drought Story Map: MAPP and the [NIDIS Program](#) launched an [interactive presentation](#), called a "story map", that analyzes and explains the historic 2011-2017 California drought. Watch the MAPP-NIDIS [webinar](#) about the story map.

MAPP Overview and Investigator Feedback Technical Report: In January 2018, MAPP surveyed both NOAA and non-NOAA MAPP PIs about their views of the program and recently summarized the results in a newly released technical report, which includes background information about MAPP and its achievements over the past 7 years.

NOAA's General Modeling Meeting and Fair: MAPP has been the leading organizer of the inaugural [NOAA General Modeling Meeting and Fair](#), September 10-12, to build on previous and current efforts to help move NOAA towards a more unified approach to modeling.

MAPP Task Force Activities: The Marine Prediction Task Force is leading a community white paper on the "Observational Needs Supporting Marine Ecosystem Modeling and Forecasting" to be published in a special issue of *Frontiers in Marine Science*. The Drought Task Force is discussing drought indicators in a monitoring context. The Model Diagnostics Task Force developing a special collection and BAMS article entitled, "A framework for process-oriented evaluation of climate and weather forecasting models". The S2S Prediction Task Force is accepting submissions through April 30, 2019 for a joint special collection as part of the AGU's *Journal of Geophysical Research-Atmospheres* and *Geophysical Research Letters*, titled "[Bridging Weather and Climate: Subseasonal-to-Seasonal \(S2S\) Prediction](#)."

THE MODELING, ANALYSIS,
PREDICTIONS, AND
PROJECTIONS PROGRAM



OVERVIEW AND
INVESTIGATOR
FEEDBACK

NEWS & MEETINGS

- RDML Tim Gallaudet is still Acting NOAA administrator
- CPO is undergoing Strategic Planning, an update to the [2014 Strategic Plan](#)
- FIREX/FIREX-AQ planning meeting will take place October 24-26, 2018 in Boulder
- Greg Frost from ESRL/CSD was appointed an Atmospheric chemistry liaison for OAR
- ESSM supported meetings/workshops:
 - "International Conference on Subseasonal to Decadal Prediction" (co-funded by CVP and MAPP), September 17-21, Boulder, Colorado
 - "International Conference on ENSO in a Warmer Climate" (co-funded by CVP, MAPP, and OOMD), October 16-18, 2018, Guayaquil, Ecuador
 - "Sources and Sinks of Ocean Mesoscale Eddy Energy" (co-funded by CVP and MAPP), March 2019, Tallahassee, Florida
 - "Atmospheric Convection and Air-Sea Interactions over Tropical Oceans" (funded by CVP), April 2-4, 2019, Boulder, Colorado
 - "Sea Level along the US East Coast: Drivers, Impacts, and Adaptation" (co-funded by CVP, MAPP, and OOMD), March-April 2019, Charleston, South Carolina



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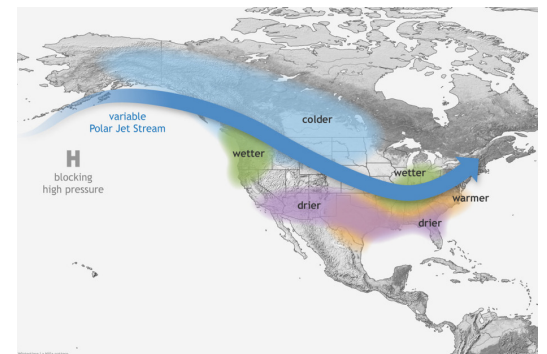
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*Assessments Program



*If you're funded by CPO programs and have a new paper accepted, or a new product or tool being released, please email your program manager to let us know about your upcoming activities. Please give us **at least 2 weeks notice** so that we can develop a highlight item for our office.*